HOLTEC INTERNATIONAL

Holtec Center, 555 Lincoln Drive West, Marlton, NJ 08053
Telephone (856) 797-0900
Fax (856) 797-0909

Attachment 3: Proposed Revised FSAR Sections – Only Sections 1.0, 4.5 and 6.2 are affected by the RAI responses. Therefore, only those sections are provided. These sections are marked in the footer with "Rev 3.D", updated from "Rev 3.B" in the initial LAR.

Sincerely,

Stefan Anton, Dr.-Ing.
Licensing Manager

Attachments: Electronic (CD), as stated

E-Mail Distribution (Letter with Appendices):

Mr. Christopher Regan, NRC

E-Mail Distribution (Letter Only):

Holtec Groups 1, 2 and 4
HUG Main and Licensing Committees
Mr. Gordon Bjorkman, NRC
Mr. Larry Campbell, NRC
Mr. Wayne Hodges, NRC
Mr. Robert Nelson, NRC

Table 1.0.1

TERMINOLOGY AND NOTATION

ALARA is an acronym for As Low As Reasonably Achievable.

Boral is a generic term to denote an aluminum-boron carbide cermet manufactured in accordance with U.S. Patent No. 4027377. The individual material supplier may use another trade name to refer to the same product.

Boral^{TM} means Boral manufactured by AAR Advanced Structures.

BWR is an acronym for boiling water reactor.

C.G. is an acronym for center of gravity.

Commercial Spent Fuel or CSF refers to nuclear fuel used to produce energy in a commercial nuclear power plant.

Confinement Boundary means the outline formed by the sealed, cylindrical enclosure of the Multi-Purpose Canister (MPC) shell welded to a solid baseplate, a lid welded around the top circumference of the shell wall, the port cover plates welded to the lid, and the closure ring welded to the lid and MPC shell providing the redundant sealing.

Confinement System means the Multi-Purpose Canister (MPC) which encloses and confines the spent nuclear fuel during storage.

Controlled Area means that area immediately surrounding an ISFSI for which the owner/user exercises authority over its use and within which operations are performed.

Cooling Time (or post-irradiation cooling time) for a spent fuel assembly is the time between reactor shutdown and the time the spent fuel assembly is loaded into the MPC.

DBE means Design Basis Earthquake.

DCSS is an acronym for Dry Cask Storage System.

Damaged Fuel Assembly is a fuel assembly with known or suspected cladding defects, as determined by review of records, greater than pinhole leaks or hairline cracks, empty fuel rod locations that are not replaced with dummy fuel rods, *whose structural integrity has been impaired such that geometric rearrangement of fuel or gross failure of the cladding is expected,* or ~~those~~ that cannot be handled by normal means. Fuel assemblies that cannot be handled by normal means due to fuel cladding damage are considered fuel debris.

Damaged Fuel Container (or Canister) means a specially designed enclosure for damaged fuel or fuel debris which permits gaseous and liquid media to escape while minimizing dispersal of gross

FPL Energy
Seabrook Station

FPL Energy Seabrook Station
P.O. Box 300
Seabrook, NH 03874
(603) 773-7000

October 6, 2003

Docket No. 50-443

NYN-03082

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Seabrook Station
Boral Spent Fuel Pool Test Coupons
Report Pursuant to 10 CFR Part 21.21

On September 15, 2003, FPL Energy Seabrook, LLC (FPLE Seabrook) reported a condition involving Boral spent fuel pool test coupons (Event #40159). Specifically, inspection of test coupons revealed bulging or blistering of the aluminum cladding. The spent fuel pool racks were built by Westinghouse Electric Corporation using Boral material manufactured by AAR Inc of Livonia, MI. In accordance with the requirements of 10 CFR 21.21(d)(3), Attachment A provides the 30-day written report of an identified defect potentially associated with a substantial safety hazard

Should you have any questions regarding this letter, please contact Mr. James M. Peschel, Regulatory Programs Manager, at (603) 773-7194.

Very truly yours,

FPLE Energy Seabrook, LLC

Mark E. Warner
Site Vice President

IE19

cc: H. J. Miller, NRC Regional Administrator
V. Nerses, NRC Project Manager, Project Directorate I-2
G. T. Dentel, NRC Senior Resident Inspector

Attachment A

10CFR21.21(d)(4) requires that the written report required by this paragraph shall include, but need not be limited to, the following information, to the extent known:

(i) Name and address of the individual or individuals informing the Commission.

Mark E Warner
Site Vice President
FPL Energy Seabrook, LLC
Seabrook Station Unit 1
PO Box 300
Seabrook, New Hampshire 03874

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Boral Spent Fuel Storage Racks

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

The spent fuel pool racks were supplied by Westinghouse Electric Corporation using Boral material manufactured by AAR Inc. of Livonia, MI.

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

FPLE Seabrook has identified an abnormality of a Boral test coupon which was removed from the Spent Fuel Pool for inspection. Boral test coupons (Boron carbide & Aluminum Composite Material) have been located in the Spent Fuel Pool as monitoring specimens to assess the performance of similar Boral neutron poison material incorporated into the Spent Fuel Pool Racks.

The boron-10 areal density in the Boral has been measured via neutron attenuation testing. This testing determined that areal density was within specification and no loss of control material existed. Furthermore, the impact of the blistering on the flux trap has been determined to be small and within bounds of the criticality analysis. Thus, the Boral is presently performing its design function.

However, the rate of blister formation and the long-term effects of these blisters on the criticality analysis are not known.

Because of the uncertainty in the future state of the Boral, Seabrook will implement a Boral Monitoring program and add a blistering allowance in the Spent Fuel Pool criticality curves.

(v) The date on which the information of such defect or failure to comply was obtained.

The 10CFR 21.21 reportability evaluation was completed on September 15, 2003

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of all such components in use at, supplied for, or being supplied for one or more facilities or activities subject to the regulations in this part.

Six Boral racks constitute 576 of the 1236 storage cells in the spent fuel pool. The spent fuel storage racks are freestanding self-supporting modules.

(vii) The corrective action, which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

FPLE Seabrook has completed an analysis and review of industry operating experience related to defects detected on Boral monitoring coupons. As a result of this evaluation, FPLE Seabrook has determined that a substantial safety hazard does not currently exist in the Seabrook spent fuel racks. This conclusion is based on the fact that boron-10 areal density in the Boral has been measured and determined to be within specification and the impact of the blistering on the flux trap has been determined to be small and within the bounds of the criticality analysis.

However, the rate of blister formation and the long-term effects of these blisters on the criticality analysis are not known.

Because of the uncertainty in the future state of the Boral used to manufacture the spent fuel racks, FPLE Seabrook will implement a Boral-monitoring program and add a blistering allowance in the SFP criticality curves. Both of these actions are currently under development and are anticipated to be in place by September 30, 2003.

(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

None.

January 30, 2004

MEMORANDUM TO: Ashok C. Thadani, Director
Office of Nuclear Regulatory Research

FROM: Farouk Eltawila, Director */RA/* by Farouk Eltawila
Division of Systems Analysis and Regulatory Effectiveness
Office of Nuclear Regulatory Research

SUBJECT: GENERIC ISSUE MANAGEMENT CONTROL SYSTEM REPORT – FIRST QUARTER FY 2004

The Generic Issue Management Control System (GIMCS) Report for the First Quarter of FY 2004 is attached for your information. Significant progress was made during the reporting period on the following generic safety issues (GSIs):

REACTOR GSIs

GSI-80, Pipe Break Effects on Control Rod Drive Hydraulic Lines in the Drywells of BWR MARK I and II Containments: Efforts continued on the finalization of the Task Action Plan (TAP) for the technical assessment of GSI 156.6.1 (below) which will address the safety concern of GSI-80. The TAP is expected to be approved in March 2004.

GSI-156.6.1, Pipe Break Effects on Systems and Components: The TAP for this GSI is expected to be approved in March 2004, as stated in GSI-80 above.

GSI-186, Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants: The technical assessment of this GSI was completed by RES with four recommendations for further work: three were sent to NRR on November 12, 2003, for Regulation and Guidance Development; and one was sent to DET/RES on November 21, 2003. NRR now has the lead responsibility for resolving this GSI which will be tracked in GIMCS until completion.

GSI-189, Susceptibility of Ice Condenser Containments to Early Failure from Hydrogen Combustion During a Severe Accident: With agreement from the ACRS on November 17, 2003, the NRC has concluded that rulemaking will be necessary to provide back-up power to one train of igniters for plants with ice condenser or MARK III containments. Completion of this issue, including implementation and verification of modifications at the affected plants, is scheduled for June 2010.

GSI-191, Assessment of Debris Accumulation on PWR Sump Performance: Regulatory Guide 1.82, Revision 3, was issued in November 2003. Completion of licensee activities in response to NRC regulations related to this issue, including both actual modifications and verification, is scheduled for December 2007.

CONTACT: Ronald C. Emrit, RES:DSARE:REAHFB
(301) 415-6447

GSI-193, BWR ECCS Suction Concerns: The initial screening of this GSI was completed on October 16, 2003, with the recommendation to continue work on the issue. The TAP for a Technical Assessment of the issue is scheduled for completion by March 2004.

GSI-195, Hydrogen Combustion in Foreign BWR Piping: The panel meeting on the screening of this issue was held on January 15, 2004. The screening analysis report is scheduled to be completed in February 2004.

GSI-196, Boral Degration: This GSI was identified on November 10, 2003, and a screening analysis is scheduled to be completed by March 2004.

At the end of the reporting period, nine reactor GSIs remained to be resolved, including four GSIs that were transferred from RES to NRR for regulation and guidance development (see Table 1). Two GSIs remained to be screened (see Table 9).

NON-REACTOR GSIs

NMSS-14, Surety Estimates for Groundwater Restoration at In-Situ Leach Fields: The staff requested additional information from USGS in October 2003, and a draft NUREG is expected to be completed in April 2004.

NMSS-16, Adequacy of 0.05 Weight Percent Limit in 10 CFR 40: The staff continued to follow the guidance of the October 8, 2003, SRM, issued in response to SECY-03-0106, which directed the staff to continue reviewing the transfer of baghouse dust containing less than 0.05 Wt% uranium and thorium.

At the end of the reporting period, three non-reactor GSIs remained to be resolved (see Table 14).

I will continue to keep you informed of progress in resolving the remaining unresolved reactor and non-reactor GSIs as well as any major problems that might surface during the course of their resolution.

Attachment: GIMCS Report, January 2004

cc:

J. Strosnider, RES	R. Barrett, NRR	R. Torres, NMSS	L. Reyes, Region II
J. Rosenthal, RES	T. Mensah, NRR	J. Bell, IRM	J. Caldwell, Region III
M. Mayfield, RES	J. Birmingham, NRR	J. Larkins, ACRS	B. Mallett, Region, IV
F. Cherny, RES	S. Black, NRR	W. Usilton, IRM	S. Duraiswamy, ACRS
S. Schneider, NRR	M. Virgilio, NMSS	J. Dyer, NRR	
B. Sheron, NRR	M. Federline, NMSS	H. Miller, Region I	

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